ORGANOPHOTORECEPTOR WITH A HYDRAZONE POLYMER CHARGE TRANSPORT MATERIAL

ABSTRACT

An organophotoreceptor comprises an electrically conductive substrate and photoconductive element on the electrically conductive substrate, the photoconductive element having

a) a charge transport material with the formula

$$\underbrace{ \begin{bmatrix} R_2 & R_1 \\ Y - C = N - N - X \end{bmatrix}}_{n} n$$

where X is a linking group having the formula - $(CH_2)_{m^-}$, branched or linear, where m is an integer between 0 and 20, inclusive, and one or more of the methylene groups is optionally replaced by O, S, C=O, O=S=O, a heterocyclic group, an aromatic group, urethane, urea, an ester group, a NR₃ group, a CHR₄ group, or a CR₅R₆ group where R₃, R₄, R₅, and R₆ are, independently, H, hydroxyl group, thiol group, an alkyl group, an alkaryl group, a heterocyclic group, or an aryl group;

 R_1 and R_2 are independently a hydrogen, a halogen, an alkyl group, an aryl group, an alkaryl group, an aromatic group or a heterocyclic group;

Y is an aromatic group; and

10

15

n is a distribution of integer values greater than 2; and

(b) a charge generating compound.

The charge transport material can be crosslinked with a polymer binder either directly or through a crosslinking agent.